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ABSTRACT

In 1981, surveys were conducted of Maryland community college graduates and their employers to assess the effectiveness of the community college programs, the programs' relationship to job demands, and perceptions of the adequacy of community college preparation for employment. Surveys sent to the 7,120 students who graduated from a community college in 1980 requested information on current employment/educational status, reasons for attending college and for selecting a particular college, satisfaction with preparation for employment and quality of instruction, relationship of job to training, salaries, and goal achievement. In addition, surveys were sent to 1,023 employers of occupational graduates who were working full-time in a field related to their major. Study findings, based on responses from 58% of the graduates and 67% of the employers, revealed: (1) 36% of the graduates had attended college to prepare for a job or to update skills and 36% to prepare for transfer; (2) 40% had chosen their college primarily because of its convenient location; (3) 76% of the respondents were employed either full-time (54%) or part-time (22%); (4) 45% of all graduates and 63% of the occupational program graduates were employed in a job directly related to their college program; and (5) 95% of the employers felt that college preparation in job skills was at least adequate and 67% felt that community college graduates were better prepared than other employees. The survey instruments and program data are appended. (HB)

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CAREER DEVELOPMENT AND JOB PERFORMANCE

FOLLOW-UP OF MARYLAND COMMUNITY COLLEGE GRADUATES

AND THEIR EMPLOYERS

Maryland State Board for Community Colleges
The Jeffrey Building • Annapolis, MD 21401
June 1983

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CAREER DEVELOPMENT AND JOB PERFORMANCE

FOLLOW-UP OF MARYLAND COMMUNITY COLLEGE GRADUATES AND THEIR EMPLOYERS

Abstract

In recent years, enrollment in occupational or career programs at Maryland community colleges has steadily increased. In Fall 1980, 44 percent of the students in the colleges were enrolled in such programs and 58 percent of the students graduating from a community college in academic year 1980-81 were graduating from an occupational program. Accompanying this growth has been an institutional emphasis on the quality and relevance of the programs being offered and a searching examination of how community colleges can best serve the vital role of preparing individuals for the world of work which exists today and which will evolve during this decade.

The Maryland State Board for Community Colleges and each community college in Maryland utilize a variety of internal information systems and external data sources to help evaluate the need for various programs and the quality and relevance of existing occupational programs. This study reports the Statewide results of a follow-up survey conducted in 1981 of 1980 graduates and a survey of the employers of these graduates. In these surveys, the graduates and their employers were asked to evaluate their community college program and to suggest areas of training which need improvement.

In general, both the graduates and their employers were satisfied with their community college preparation and rated the community college programs high. In particular, the employers rated graduates high on job skills, familiarity with equipment, and technical knowledge. In addition, the employers rated community college graduates high on their ability to learn new techniques, work quality, ability to communicate, ability to work well with others, and work attitudes. Because of these characteristics and their experience with community college graduates, employers reported they were likely to give preference to community college graduates for future jobs.

PREFACE

How well do Maryland community colleges prepare their graduates for the world of work? This report examines responses concerning career development and job performance from Statewide student follow-up studies and from a survey of employers of community college graduates. These surveys are part of the effort of each community college and the State Board for Community Colleges to ensure continued quality and relevance of community college programs to both students and the businesses and industries of Maryland.

Although primary credit for this study goes to Dan McConochie, the surveys of graduates and their employers were conducted by the follow-up study coordinators of each community college. The help of these individuals and the guidance of the Maryland Community College Research Group is gratefully acknowledged. Ms. Margaret M. Dalton, a faculty member at Frostburg State College, worked on this project during an internship sponsored by the Regional Educational and Services Agency (RESA).

This report constitutes one part of a two-part follow-up report. A companion report published in May 1983 dealt principally with students intending to transfer to four-year colleges and universities. The two reports should be considered as complementing one another.

Participation by the Board is supported in part by a grant from the Maryland State Department of Education, Division of Vocational-Technical Education.

James D. Tschechtelin
Executive Director

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CAREER DEVELOPMENT AND JOB PERFORMANCE

FOLLOW-UP OF MARYLAND COMMUNITY COLLEGE GRADUATES AND THEIR EMPLOYERS

INTRODUCTION

Community colleges in Maryland are comprehensive colleges offering a wide variety of programs oriented toward transfer to four-year colleges and/or toward preparation for the world of work. For students interested in updating job skills, retraining for a new job, or preparing for entry into a particular occupation, a large number and diversity of credit programs and noncredit courses are available. (See Appendix A for a listing of programs at Maryland community colleges.)

Occupational programs leading to an associate degree involve courses in the skills and knowledge required for a particular occupation along with arts and sciences course requirements in the humanities, natural sciences and mathematics, and the social sciences. Many of the programs also offer certificate awards for students who complete sequences of particular occupational courses. Enrollment in occupational programs has increased steadily during the past four years and in Fall 1982, the number of students pursuing degrees in occupational programs was over 42,000 (Table 1). During this same period the number of students completing certificate programs with occupational skills increased and the number graduating with associate degrees from occupational programs was approximately 3,600 each year.

In addition to courses and curriculae leading to formal awards in occupational areas, there are many noncredit courses offered as continuing education in an occupational field as well as short courses designed to teach particular skills. Enrollment in these various noncredit occupational offerings has increased steadily over the past four years. In fiscal year 1982 there were almost 100,000 students in more than 6,383 State aided noncredit courses learning vocational skills in subject areas including agriculture, architecture, business, communications, computer science, engineering, industrial arts, and health care. Additional information on the characteristics of noncredit continuing education students is now becoming available from systemwide implementation of a continuing education data tape system. Additional information on continuing education students will be provided in future reports.

This report examines only the graduates of degree or formal award programs. It surveys both the graduates of these programs and their employers and analyzes their responses to questions concerning the overall effectiveness of community college programs, the programs' relationship to job demands, and the adequacy of preparation as perceived by the graduate and by the employers of the graduates.

Table I

ENROLLMENT IN OCCUPATIONAL PROGRAMS

College	Fall 1978 Number	Fall 1978 % of Total	Fall 1979 Number	Fall 1979 % of Total	Fall 1980 Number	Fall 1980 % of Total	Fall 1981 Number	Fall 1981 % of Total
Allegany	1,148/1,791	64	1,054/1,777	59	1,086/1,844	59	1,198/1,996	60
Anne Arundel	2,728/6,502	42	3,021/7,366	41	3,178/7,388	43	4,044/8,280	49
Baltimore	4,021/8,253	49	4,037/8,278	49	4,809/9,451	49	3,446/8,336	41
Catonsville	4,567/11,012	42	4,594/11,111	41	4,777/11,517	41	5,674/11,545	49
Cecil	438/1,209	36	395/1,169	34	452/1,184	38	550/1,360	40
Charles	858/3,462	25	958/3,775	25	945/4,084	23	1,121/4,003	28
Chesapeake	366/1,468	25	325/1,631	20	358/1,634	22	299/1,729	17
Dundalk	1,163/2,325	50	1,143/2,296	50	1,124/2,213	51	1,163/2,320	50
Essex	4,847/9,774	50	4,602/9,371	49	4,724/9,403	50	5,276/9,488	56
Frederick	407/1,731	24	717/1,802	40	816/2,103	39	1,143/2,716	42
Garrett	199/565	35	218/665	33	227/653	35	181/647	28
Hagerstown	1,078/2,244	48	1,032/2,141	48	1,083/2,242	48	1,121/2,361	48
Harford	1,655/3,674	45	1,653/3,973	42	2,005/4,180	48	2,148/4,433	49
Howard	830/2,387	35	1,025/2,621	39	1,222/3,042	40	1,437/3,330	43
Montgomery:								
Rockville	2,389/11,208	21	2,469/11,628	21	4,466/12,054	37	4,272/12,113	35
Takoma Park	767/2,927	26	738/3,055	24	1,090/3,737	29	1,298/3,990	33
Germantown	165/1,254	13	294/1,638	18	736/1,924	38	1,040/2,608	40
Prince George's	4,678//13,828	34	4,753/13,477	35	5,506/13,747	40	6,071/14,657	41
Wor-Wic Tech	419/462	91	495/578	86	535/627	85	529/646	82
TOTAL	32,723/86,076	38	33,523/88,352	38	39,139/93,027	42	42,011/96,558	44

Source: Enrollment Information System

Table 2

OCCUPATIONAL ASSOCIATE DEGREES AWARDED

College	Fiscal Year 1978 Number	% of Total	Fiscal Year 1979 Number	% of Total	Fiscal Year 1980 Number	% of Total	Fiscal Year 1981 Number	% of Total
Allegany	267/344	78	253/323	78	241/317	76	193/250	77
Anne Arundel	255/539	47	237/516	46	240/533	45	260/511	51
Baltimore	571/861	66	620/901	69	451/822	55	462/817	57
Catonsville	394/687	57	413/772	54	318/628	51	334/667	50
Cecil	45/108	42	24/67	36	30/68	44	32/59	54
Charles	61/153	40	93/187	50	93/169	55	106/189	56
Chesapeake	37/97	38	58/101	57	57/103	55	39/97	40
Dundalk	58/157	37	53/143	37	70/155	45	66/148	45
Essex	348/737	47	359/764	47	345/720	48	346/655	53
Frederick	81/152	53	76/154	49	40/109	37	60/144	42
Garrett	24/62	39	27/57	47	41/64	64	37/91	41
Hagerstown	119/285	42	117/253	46	115/243	47	137/273	50
Harford	137/346	40	155/342	45	189/376	50	212/383	55
Howard	104/171	61	110/179	61	135/214	63	112/189	59
Montgomery:								
Rockville	323/640	50	354/650	54	321/630	51	323/607	53
Takoma Park	207/257	81	198/244	81	211/272	78	171/228	75
Germantown	1/3	33	1/6	17	9/45	20	18/39	46
Prince George's	637/980	65	708/1,030	69	684/1,033	66	649/957	68
Wor-Wic Tech	22/22	100	40/40	100	42/42	100	41/41	100
TOTAL	3,691/6,601	56	3,896/6,729	58	3,632/6,543	56	3,598/6,345	57

Source: SBHE Report D, Degrees Awarded

PURPOSE OF THE STUDY

One of the goals of Maryland community colleges is to continue the high quality occupational programs and students services, which have attracted students, and to respond to changing local, regional, and State manpower requirements.[1]

The State Board for Community Colleges and each community college in Maryland pursue this goal with the advice and assistance of program advisory committees comprised of employers and with a variety of planning and evaluation activities. One important step in the process of building and maintaining occupational programs is the continuous review and evaluation of current programs. Annually every program in each community college in Maryland is examined and compared on a number of indicators, including enrollment, degrees awarded, discipline costs, and the responses of program graduates and their employers to follow-up surveys.[2]

The surveys of graduates and their employers provide useful information on possible trends in the students' perception of their training and permit the employers to evaluate the community college in achieving job preparation goals. The questions asked in the employer survey permit employer evaluation of (1) the technical skills and job performance of the graduates; (2) the community college training of the graduate; and (3) the inter-personal aptitude and attitudes of the graduate. Analyses of these responses provide indicators of the strengths and weaknesses of occupational education in the community colleges and suggest areas for improvement.

This report presents a summary of the responses to occupationally related questions from the survey of 1980 graduates. These responses indicate student goals upon entering the community college, achievement of those goals, and eventual employment status. In addition, information is presented concerning the graduates' evaluations of the training at the community colleges and the graduates' perception of how the community colleges helped the graduates achieve their goals.

The report also examines closely the results from the survey of employers of the 1980 graduates. In presentation of these responses, the discussions are grouped into three categories: (1) responses to questions concerning employee performance; (2) responses to questions concerning the community college program; and (3) responses to questions concerning the attitude or inter-personal skills of the employed graduate. Included in the first category are performance of job skills, familiarity with test equipment, ability to learn new techniques, technical knowledge, and work quality. Included in the evaluation of the program are the overall ratings of vocational training and a comparison of the employee to other employees. The evaluation of attitude or inter-personal skill includes the ability to communicate with superiors and work well with others, as well as work attitude. The responses to the employer survey are presented for the entire state, including all occupational degree programs at all community colleges.

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1 State Plan for Community Colleges in Maryland, June 1982, State Board for Community Colleges, Annapolis, MD, 1982.

2 See Appendix B for sample display of the SBCC Program Data Monitoring System.

See also: Program Evaluation System, State Board for Community Colleges Bulletin, Annapolis, MD, 1980.

METHODOLOGY

The Questionnaires

The questionnaires used in the graduate and the employer surveys were designed by the Maryland Community College Research Group which is comprised of the Institutional Research Directors of each Maryland community college. The questionnaires were designed to provide useful information at the program, college, and Statewide levels. Particular responses are used in the Program Data Monitoring (PDM) system and in other reporting systems, such as the Federal Vocational Education Data System (VEDS). Each questionnaire is reprinted in Appendix C.

Data Collection Procedures

The questionnaires were printed by the State Board for Community Colleges and mailed and collected by each of the community colleges. The 1980 graduates were surveyed in the Spring of 1981, one year after graduation from the community college. Non-respondents were followed up with a second and sometimes a third mailing. The employers of the 1980 graduates were surveyed in the Summer of 1981.

Response Rates and Sample Bias

The response rate for the 7,120 students who graduated in 1980 was 58 percent (n = 4,265). The employer questionnaires were sent to the employers of graduates who (1) had graduated from an occupational program; (2) were employed full-time; (3) were employed in a field related to their college program; and (4) gave their permission for the community college to contact their employer. These criteria were met by 1,023 graduates. Total employer responses numbered 688, a 67 percent response rate.

Comparisons of respondent characteristics with those of the total population of 1980 graduates were made whenever possible to check for sampling bias. For example, a majority of the graduates of Maryland community colleges comes from five large metropolitan community colleges (Table 3). Similarly, a large proportion of the respondents to the graduate and employer surveys is from these colleges. Table 3 shows how closely the relative number of respondents and employers from each college corresponded to the size and relative proportion of the graduates from the college.

Table 3

GRADUATES AND RESPONDENTS

College	Fiscal Year 1980					
	Graduates		Graduate Follow-Up		Employer Follow-Up	
	N	%	N	%	N	%
Allegany	364	5.0	210	4.9	51	7.4
Anne Arundel	566	8.0	388	9.1	69	10.0
Baltimore	892	12.0	404	9.5	60	8.7
Catonsville	852	11.5	407	9.5	41	6.0
Cecil	73	1.0	49	1.1	10	1.5
Charles	222	3.0	147	3.5	30	4.4
Chesapeake	125	2.0	35	.8	4	.6
Dundalk	208	3.0	139	3.3	26	3.8
Essex	757	10.0	447	10.5	50	7.3
Frederick	143	2.0	106	2.5	18	2.6
Garrett	68	1.0	36	.8	6	.9
Hagerstown	259	3.5	186	4.4	30	4.4
Harford	439	6.0	233	5.5	39	5.7
Howard	253	3.0	177	4.2	53	7.7
Montgomery	1,037	14.0	727	17.1	111	16.1
Prince George's	1,067	14.0	524	12.3	90	13.1
Wor-Wic Tech	74	1.0	50	1.2	-	-
TOTAL	7,399	100.0	4,265	100.0	688	100.0

N = number

Note: Percentages may not total 100 due to rounding.

The sex, race, program, and college of attendance of the respondents were compared with the distribution of these characteristics in the population of graduates. The proportion of males and females in the sample was very similar to those in the population, 41 percent of the respondents were male and 42 percent of the population of graduates were male. Minority students were less likely to have responded than white students but the differences were not strong (19 percent of the graduates and 13 percent of the respondents were minority). The proportion of respondents in occupational programs was quite similar to that of graduates from this type of program. For example, 17 percent of all respondents were graduates of a business and commerce program and 16 percent of the population of graduates were in this type of program. Based upon the high response rate and comparisons between the sample and population characteristics, the responses of the graduate survey are considered representative of all 1980 graduates.

Table 4

RESPONSE RATE

College	Unduplicated Graduates	Undeliverable Questionnaires	Usable Responses	Adjusted Response Rate
Allegany	347	- 13	210	63%
Anne Arundel	556	- 27	388	73
Baltimore	870	- 96	404	52
Catonsville	706	- 36	407	61
Cecil	66	- 4	49	71
Charles	208	- 1	147	67
Chesapeake	127	-	35	28
Dundalk	201	- 4	139	71
Essex	749	- 45	447	64
Frederick	143	- 2	106	75
Garrett	69	- 3	36	55
Hagerstown	258	- 21	186	79
Harford	417	- 54	233	64
Howard	240	- 26	177	83
Montgomery	1,029	- 70	727	75
Prince George's	1,067	- 75	524	53
Wor-Wic Tech	67	-	50	64
TOTAL	7,120	- 477	4,265	64

Analyses

After completing the survey, the respondents mailed the questionnaire to their college. Each college added additional coded information to the questionnaire concerning the student's program, enrollment status, credit hours completed, grade point average, and demographic characteristics. The questionnaires were then sent to the State Board for Community Colleges where computer files were constructed for each college and for the community college system. Analyses of each survey item for each college were sent to the college along with a copy of the Statewide totals for the survey. Each college has used these results to follow up their graduates and to examine employer reactions to their programs.

If a college dean or a division chairman was especially interested in graduates from a particular program, the research results were generated for that particular subgroup of respondents. Furthermore, this group of graduates could be compared with graduates of similar programs offered by other community colleges throughout the State.

DEFINITIONS, ASSUMPTIONS, AND LIMITATIONS

Definitions

Program: a series of courses leading to a certificate or associate degree and the basis for reporting data at the state level.

Certificate: an award granted for the successful completion of 12 to 45 credits of instruction in an occupational program.

Associate in Arts: a degree awarded for the successful completion of a prescribed curriculum of at least 60 credits; the same award is given for both transfer and occupational programs.

Academic goal: the aim of the student in terms of credentialing; in this study, academic goals can be courses of interest, certificate, or an associate in arts degree.

Personal goal: the aim of the student in terms of functional reasons for attendance, such as to prepare for employment or transfer.

Career development: the preparation for new employment or continued growth in one's current occupation.

Assumptions

It was assumed that (1) goals of each Maryland community college include helping students to achieve educational and career goals; (2) each Maryland community college wants to know about the outcomes of the educational process and will use such knowledge to improve the college; and (3) assessing the outcomes of education is a complex task and the current study must be combined with other evidence to draw an accurate picture.

Limitations

The outcomes explored were basic and limited to goal achievement and employment. While these outcomes are important, they represent only a fraction of the possible effects of a college education. Changes in aspirations, competence, and personality were not investigated. The experiences of graduates who transferred is not examined.

Finally, the study made no attempt to compare college outcomes with the outcomes of other institutions, such as proprietary schools and military training programs.

CAREER DEVELOPMENT

Characteristics of Graduates

Table 5 shows the number of respondents from each of the six broad occupational program areas and from the seven transfer program areas. Although most of the respondents had graduated from occupational programs, the largest number (1,089) from a single program area was from General Studies, a transfer program area including the general courses usually found in the lower division of a four-year college program.

Table 5

GRADUATES BY PROGRAM AREA AND PROGRAM TYPE

Program Area and Type	Number	Percent
Transfer Area:		
Arts and Sciences	164	4
Biology and Physical Sciences	37	1
Humanities and Social Sciences	12	-
Pre-Engineering	61	1
General Studies	1,089	26
Teacher Education	104	3
Business Administration	305	7
Total Transfer Area	1,772	42
Occupational Area:		
Business and Commerce	725	17
Data Processing	273	7
Health Services	766	18
Mechanical and Engineering	229	6
Natural Science	59	1
Public Service	395	9
Total Occupational Area	2,447	58
TOTAL TRANSFER AND OCCUPATIONAL	4,219	100

Missing Data = 46

Programs in the Health Services Technologies area which includes Nursing, Medical Laboratory Technology, and Dental Assisting, had 766 graduates, or 18 percent of the total. The Business and Commerce program area, which includes programs in Banking, Merchandising, Secretarial Science, Accounting, Business Management, International Trade, Hospitality Management, and Commercial Art, had 725 graduates, or 17 percent of the total. The Public Service Technologies program area had 395 respondents, or 9 percent of the total respondents. This program area includes programs such as Criminal Justice, Fire Protection Technology, Legal Assistant, Corrections Technology, Recreation and Parks Management, and Child Development.

There were 273 respondents who had graduated from programs in the Data Processing Technologies area. Programs in this area include Computer Programming, Data Processing Equipment Maintenance, and Computer Operations. Occupational programs in the Mechanical and Engineering Technologies area, including Electrical Engineering, Architectural Drafting, Automotive, Chemical, and Construction Inspection Technologies, had 229 graduates and 5 percent of the total.

The Natural Science Technologies program area with programs in Oceanography, Science Laboratory Technology, Wildlife Management, Fisheries Science, and Environmental Health, had one percent of the total graduates.

Data from Table 6 indicate that 84 percent of the total respondents and of the occupational program graduates were white, 10 percent were black; and there were small numbers of American Indian, American Asian, American Hispanic, and foreign students among the graduates of both transfer and occupational programs.

Table 6

GRADUATES BY RACE AND PROGRAM TYPE

	Total		Transfer		Occupational	
Race	Number	Percent	Number	Percent	Number	Percent
Black	355	10	144	9	211	10
American Indian	48	1	25	2	23	1
Asian	48	1	13	1	35	2
Hispanic	30	1	14	1	16	1
White, non-Hispanic	3,094	84	1,343	85	1,751	84
Foreign	52	1	24	2	28	1
Other	42	1	18	1	24	1
TOTAL	3,669	100	1,581	100	2,088	100

Unknown Race = 550

Most graduates of both transfer and occupational programs were female (Table 7). Females made up 59 percent of the total respondents, 56 percent of the graduate respondents from transfer programs, and 62 percent of the graduate respondents from occupational programs.

Table 7

GRADUATES BY SEX AND PROGRAM TYPE

Sex	Total		Transfer		Occupational	
	Number	Percent	Number	Percent	Number	Percent
Male	1,712	41	780	44	932	38
Female	2,493	59	984	56	1,509	62
TOTAL	4,205	100	1,764	100	2,441	100

The average age of those graduating from an occupational program was 28.6 which was only slightly older than the graduates of the transfer programs (28.2). Only 4 percent of the graduates were less than 20 years old and 13 percent were over 40 years old.

Status of Graduates

Table 8 shows the status for all the graduates and for graduates of the two types of programs: transfer and occupational. Fifty percent of the total graduates were employed and another 26 percent were employed while attending a transfer college.

Among those who were employed only (had not transferred), most were employed full-time. Among those who had transferred (42 percent), 1,106 or 62 percent reported they were also working and many of these were working full-time. The proportion of the total graduates who reported full-time home responsibilities was 4 percent. The proportion who reported they were unemployed and seeking work was 4 percent.

Eighty-three percent of the graduates of occupational programs reported they were working either full-time or part-time. In addition, 20 percent of these graduates had transferred and 12 percent were full-time transfer students. Sixty-three percent were employed only and 4 percent reported being unemployed and looking for work.

Table 8

GRADUATES BY PROGRAM TYPE AND CURRENT STATUS

Status	Total		Transfer		Occupational	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	4,219	100	1,772	100	2,447	100
Employed Only:	2,112	50	577	32	1,535	63
Full-time	1,710	41	457	26	1,253	51
Part-time	402	9	120	6	282	12
Employed and Transferred:	1,106	26	614	35	492	20
Employed full-time	539	13	247	14	292	12
Employed part-time	567	13	367	21	200	8
Transferred Only	662	16	438	25	224	9
Home	185	4	87	5	98	4
Seeking Employment	154	4	56	3	98	4

Career Development

Given this information concerning the status of the graduates, it appears that most community college graduates find themselves in the world of work after they graduate. Even among those who transferred, a large number were working and there were few graduates who remained full-time in the home or who could not find work.

Did the community college help these students to prepare for this world of work? The following questions will help guide the search to determine how the community colleges performed this vital role.

- What were the goals of the graduates?
- Why did the graduates choose their community college?
- How satisfied were the graduates with their community college preparation for employment? How satisfied were they with the quality of the instruction in their program?
- What proportion of the graduates were employed full-time? Part-time? What reasons were given for being unemployed?
- What proportion were employed in jobs related to their field of training? What were the reasons that the job did not relate to the graduate's community college program?
- Where were the full-time employed graduates working?

- What were the salaries of the graduates who were employed full-time?
- What proportion of the graduates achieved their goals?

What were the goals of the graduates?

Thirty-six percent of the total graduates reported their primary reason for attending the college had been occupationally oriented. Thirty-six percent reported they had gone to the community college to prepare for transfer to a four-year college and 28 percent reported other reasons for attending, including self-enrichment, personal interest, and exploring a new area.

The data in Table 9 illustrate a number of points about the goals and motivations of those attending community college.

Most graduates of transfer programs had attended to prepare for transfer (61 percent) but some had been in transfer programs with the intention of preparing for a job or updating skills (11 percent), and an even larger proportion said they had attended in order to explore a new area, because of personal interest and for self-enrichment (26 percent).

Most graduates of occupational programs had attended to prepare for a job or to update skills (53 percent). However, a sizable number of the occupational program graduates reported they attended because they were preparing to transfer (18 percent) or because they were personally interested, were exploring a new area, or were interested in self-enrichment (26 percent). The responses of graduates of these two types of programs forces us to be aware that a number of graduates of occupational programs intend to transfer and that some graduates of transfer programs attended the community college primarily for preparation for a job. The number in both groups who had neither transfer or occupational preparation as their primary goal should remind us of the great variety among the community college graduates and the multiple and often apparently contradictory reasons people have for continuing their education.

Table 9

GOALS OF GRADUATES

Primary Reason	Total	Transfer	Occupational
Preparation for job or update of skills	36%	11%	53%
Preparation for transfer	36	61	18
Interest/self-enrichment/ exploration of new area	26	26	26
Other	2	2	3

Why did the graduates choose their community college?

The largest proportion of graduates (40 percent) had selected their community college because of its convenient location (Table 10). Thirty percent had chosen their community college because the program they wanted had been available and 17 percent reported the primary reason was its low cost. These three reasons, combined with the college's good academic reputation (5 percent), were cited by 92 percent of the graduates as the primary reason for selecting the college. Four percent reported they had selected the college because of friends, because financial aid was available, or because of a high school counselor's advice. The large number who reported these positive reasons for attending and the small number (4 percent) who reported they had been unwilling or unable to attend another college suggest that students were drawn to the assets of the college and the college was a strong positive alternative when students had begun searching for a college.

Graduates of transfer programs were more likely to have been influenced by the convenient location and the low cost of the community college. Graduates of occupational programs were more likely to have cited the availability of the desired programs and then the location as the primary reasons they chose the college (Table 10).

Table 10

PRIMARY REASONS FOR CHOICE OF COLLEGE

Primary Reason	Total	Transfer	Occupational
Convenient location	40%	49%	33%
Program I wanted was offered	30	12	43
Low cost	17	23	13
College's academic reputation	5	7	4
Unwilling or unable to attend another college	4	5	2
Advice of friends or high school counselor	3	3	3
Financial aid available	2	1	2

How satisfied were the graduates with their community college preparation for employment? How satisfied were they with the quality of the instruction in their program?

The graduates were asked how satisfied they were with the community college preparation for employment. Table 11 presents the data resulting from this crucial question. More than 90 percent of the graduates were satisfied or extremely satisfied with the job preparation they received at the community college. Graduates of occupational programs were more likely to be extremely satisfied with this preparation (32 percent) than the graduates of transfer programs (18 percent) who found themselves employed.

Satisfaction with preparation for a career was highest among graduates of Nursing (95 percent), Data Processing (95 percent), Accounting (93 percent), and Law Enforcement (94 percent).

Students also highly valued the quality of classroom instruction in their program (Table 11). There were no differences in this evaluation between occupational and transfer programs: each type of program received near unanimous high marks from the graduates with over 97 percent of the graduates reporting they were satisfied or extremely satisfied with the quality of classroom instruction in their program.

Table 11

GRADUATE SATISFACTION WITH PREPARATION FOR EMPLOYMENT

	Total	Transfer	Occupational
Satisfaction with Preparation for Work			
Extremely satisfied	27%	18%	32%
Satisfied	64	71	61
Unsatisfied	9	11	7
Satisfaction with Quality of Classroom Instruction in Your Program			
Extremely satisfied	44	47	41
Satisfied	53	51	55
Unsatisfied	3	2	4

What proportion of the graduates were employed full-time? Part-time? What reasons were given for being unemployed?

Seventy-six percent of the 1980 graduates were employed one year after they had graduated; 54 percent full-time and 22 percent part-time. (See Figure 1, Employment Status of Graduates.)

As might be expected, graduates of occupational programs were more likely to be employed full-time. Graduates of transfer programs were more likely to be employed part-time as they continued their education. Figure 1 summarizes the employment status of the graduates. Most of the graduates who were not employed were full-time transfer students or had full-time responsibilities in the home (Table 8). Among those who reported they were unemployed and seeking a job (154 respondents, or 4 percent of the total), most reported they were unemployed because they needed more education (68 respondents), there were too few openings (32 respondents), or they had not looked hard enough (28 respondents). Twenty graduates reported they were out of work because they had changed their career objectives.

What proportion were employed in jobs related to their field of training? What were the reasons that the job did not relate to the graduate's community college program?

Seventy-three percent of the 1980 graduates were employed in jobs which were directly or somewhat related to their community college program (Table 12). Among graduates of occupational programs this proportion increased to 85 percent.

Among those who reported that their job did not relate to their community college program, there were a number who reported there were no jobs in their field (24 percent) or who had decided they did not want to work in their community college field of preparation (7 percent). Most, however, had found better pay (19 percent), found a better opportunity (9 percent), or had found other positive reasons for taking a job outside their field of study.

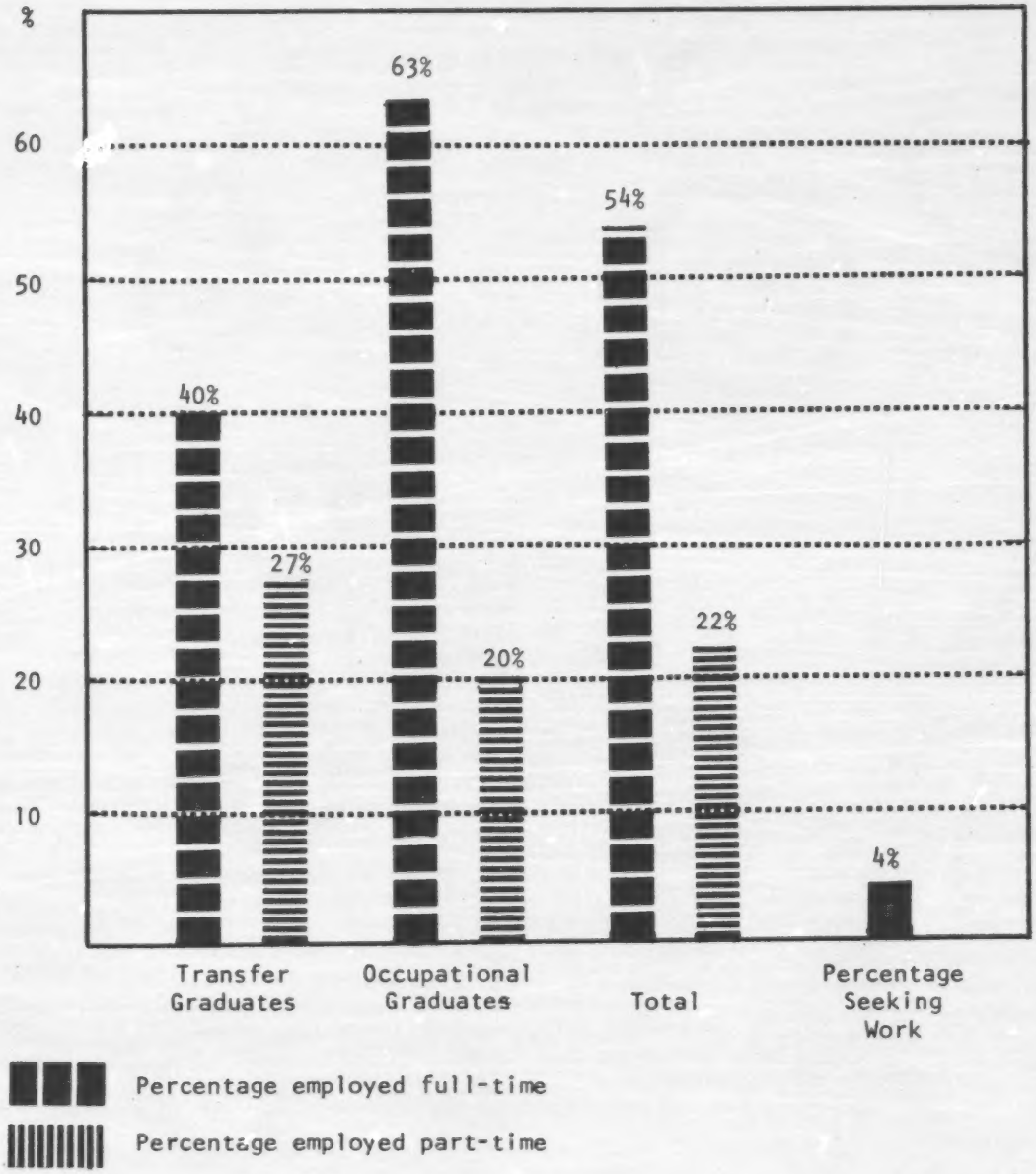
Table 12

RELATIONSHIP OF GRADUATE'S PROGRAM TO JOB

Relationship	All Graduates	Occupational
Directly related	45%	63%
Somewhat related	28	22
Not at all related	27	15

Figure I

EMPLOYMENT STATUS OF GRADUATES
ONE YEAR AFTER GRADUATION



Where were the full-time employed graduates working?

Nearly half of the graduates who were working full-time were employed in the same county as the community college from which they graduated (Table 13). Thirty-four percent were employed in some other Maryland location, and most of the remaining were employed in either Washington, DC (10 percent), Virginia (3 percent), Pennsylvania (2 percent), or West Virginia (one percent). Less than one percent were working in Delaware and 3 percent were working in some other state or overseas.

Table 13

EMPLOYMENT LOCATION OF GRADUATES

Location	All Full-time Employed Graduates	
	Number	Percent
Same county as community college	1,045	47
Other Maryland county	357	16
Baltimore City	394	18
Washington, DC	227	10
Delaware	12	-
Pennsylvania	42	2
Virginia	62	3
West Virginia	19	1
Other state	75	3
TOTAL	2,233	100

What were the salaries of the graduates who were employed full-time?

Beginning full-time salaries for graduates of community college programs averaged $14,223 with the highest average salaries among those who graduated in Mechanical and Engineering Technologies ($16,304) and the lowest in Natural Science Technologies ($10,689). Table 14 presents the average annual salary for the graduates of all program areas.

Specific programs with high average annual salaries were Real Estate ($19,752), Printing ($20,376), Data Processing and particularly Data Processing Equipment and Maintenance ($17,888), Occupational Safety ($22,244), Physician's Assistant ($17,794), Aeronautical Engineering Technology ($18,769), and Mechanical Technology ($20,130). Programs with low average annual salaries were Retail Floristry ($7,575), Special Education ($7,488), and Fashion and Interior Design ($7,071).

These average annual salaries include the salaries of some individuals who began their current jobs before they had graduated and of those who worked in their jobs before they entered college. The average starting salary, the annual salary for those who began their present job after graduating from the college, was $12,784, while the salary of the 265 persons who had begun their job before entering the community college was $17,852.

Table 14

AVERAGE ANNUAL SALARIES OF GRADUATES BY PROGRAM AREA

Program Area	Average Annual Salary
Transfer programs (533)	$14,746
Business and Commerce (349)	13,399
Data Processing (147)	15,885
Health Services (405)	13,250
Mechanical and Engineering (134)	16,304
Natural Science (24)	10,689
Public Service (184)	14,006
AVERAGE ALL PROGRAM AREAS	$14,223

What proportion of the graduates achieved their goals and what proportion of the graduates whose goal had been career development were employed full-time?

Eighty-six percent of the total graduates reported they had achieved the educational goal they had checked as the primary reason they attended the college. This self-reported rate of achievement was not related to whether the student had graduated from an occupational or transfer program. Eighty-seven percent of graduates of occupational programs and 86 percent of graduates of transfer programs reported they had achieved their primary reason for attending the college by the time they graduated.

Among those whose primary goal had been to prepare for immediate entry into a career, 74 percent were employed full-time (Table 15). This measure of career goal achievement was analyzed by sex and race. Males were slightly more likely to be employed full-time when their goal had been preparation for immediate career. No differences in employment goal achievement by race were found.

Among programs, the highest achievement of this employment goal was found in Data Processing, Fire Science, and Dental Hygiene while the lowest employment goal achievement was found in Mental Health and Medical Technologies.

Table 15

FULL-TIME EMPLOYMENT AMONG GRADUATES
WHOSE GOAL WAS CAREER DEVELOPMENT

Goal	Graduates
Prepare for immediate entry into a career or to update current job skills	1,389
Total employed full-time	1,023
Percent achieving employment goal	74%

JOB PERFORMANCE

A total of 688 employers evaluated the job performance and community college preparation of the 1980 graduates of occupational programs. The following analyses are based on the employers of graduates who had graduated from an occupational program, were employed full-time, were employed in a field related to their college program, and gave their permission for the community college to contact their employer.

These employers include a wide cross section of businesses in the State of Maryland. There is no evidence that they are representative of all employers in the State. However, among those who responded, there were large and small firms, private and public employers, and employers from every geographical section. Table 16 shows the number and percentage of employers by occupational program area. The responses to the employer survey are presented for the entire State, including all occupational degree programs at all community colleges.

Table 16

EMPLOYERS OF 1980 GRADUATES
BY PROGRAM AREA

Occupational Program Area	Employers	
	Number	Percent
Business and Commerce	177	27
Data Processing	77	12
Health Services	235	36
Mechanical and Engineering	64	10
Natural Science	14	2
Public Service	93	14
TOTAL	660	100

Missing Data = 28

RESEARCH QUESTIONS

The research questions which guided the examination of these responses are presented below.

A. What proportion of the employers rate the college's preparation of the graduate as adequate or more than adequate in the following areas: (1) Performance of job skills; (2) Familiarity with test and laboratory equipment required by the job; (3) Ability to learn new techniques on the job; and (4) Ability to communicate with superiors and ability to work well with other workers.

B. How do the employers rate the vocational training as it relates to the graduate's job in the areas of technical knowledge, work attitude, and work quality?

C. How do community college graduates compare to other employees?

D. How often is a community college degree required or preferred in hiring for the position?

A-1 How do the employers rate the college preparation of the graduate in the performance of needed job skills?

Ninety-five percent of the employers felt that the college preparation for performance of needed job skills was adequate or more than adequate (Table 17). Employers of graduates in the Business and Commerce programs were the most likely to rank their employees as more than adequately prepared by the college.

Table 17

PREPARATION FOR PERFORMANCE OF NEEDED SKILLS
BY PROGRAM AREA

Occupational Program Area	More Than Adequate	Adequate	Less Than Adequate	Total Number	Total Percent
Business and Commerce	51%	41%	3%	173	100
Data Processing	39	52	9	75	100
Health Services	31	62	7	232	100
Mechanical and Engineering	33	65	2	63	100
Natural Science	38	62	-	16	100
Public Service	45	54	1	86	100
TOTAL	39	56	5	645	100

Missing Data = 133

A-2 How do employers rate the graduate's familiarity with required test and laboratory equipment?

Ninety-one percent of all employers reported employee familiarity with necessary test and laboratory equipment was adequate or more than adequate. Employers of graduates of Business and Commerce programs, such as Business Administration and Secretarial Science, were the most likely to rank their employees as more than adequately prepared in this area. Eight graduates of Data Processing and 32 graduates of Health Services programs were rated as less than adequately prepared in their familiarity with necessary equipment.

Table 18

FAMILIARITY WITH TEST AND LABORATORY EQUIPMENT
BY PROGRAM AREA

Occupational Program Area	More Than Adequate	Adequate	Less Than Adequate	Total Number	Total Percent
Business and Commerce	47%	51%	2%	98	100
Data Processing	33	53	14	57	100
Health Services	24	61	15	217	100
Mechanical and Engineering	28	66	7	58	100
Natural Science	22	78	-	9	100
Public Service	33	67	-	49	100
TOTAL	31	60	9	488	100

Missing Data = 290

A-3 How do employers rate the graduate's ability to learn new techniques?

The employers rated these graduates very high on their ability to learn new techniques on the job (Table 19). Graduates in each of the program areas were rated high on this characteristic with most being more than adequately prepared by the college.

Table 19

ABILITY TO LEARN NEW TECHNIQUES
BY PROGRAM AREA

Occupational Program Area	More Than Adequate	Adequate	Less Than Adequate	Total Number	Total Percent
Business and Commerce	60%	39%	1%	177	100
Data Processing	55	44	1	77	100
Health Services	53	45	2	235	100
Mechanical and Engineering	58	42	-	64	100
Natural Sciences	36	64	-	14	100
Public Service	58	42	-	93	100
TOTAL	56	43	1	660	100

A-4 How do employers rate the college's preparation of the graduates to communicate with superiors and work with others?

Ninety-five percent of all employers felt the graduate's ability to communicate with superiors was adequate or more than adequate. There were no differences between program areas on this uniformly high rating of communcation ability (Table 20). Employers were also unanimous in rating high the college's preparation of the graduate to work well with other workers (Table 21).

Table 20

EMPLOYER RATING OF PREPARATION TO COMMUNICATE WITH SUPERIORS
BY PROGRAM AREA

Occupational Program Area	More Than Adequate	Adequate	Less Than Adequate	Total Number	Total Percent
Business and Commerce	51%	45%	3%	174	100
Data Processing	42	55	3	76	100
Health Services	45	48	6	234	100
Mechanical and Engineering	48	48	3	64	100
Natural Sciences	44	44	13	16	100
Public Service	57	39	4	93	100
TOTAL	48	47	5	657	100

Table 21

EMPLOYER RATING OF PREPARATION TO WORK WELL WITH OTHER WORKERS BY PROGRAM AREA

Occupational Program Area	More Than Adequate	Adequate	Less Than Adequate	Total Number	Total Percent
Business and Commerce	59%	37%	4%	177	100
Data Processing	55	42	4	77	100
Health Services	54	42	4	235	100
Mechanical and Engineering	56	44	-	64	100
Natural Science	50	38	12	16	100
Public Service	59	40	1	94	100
TOTAL	56	41	3	663	100

B. How do employers rate the vocational training of the community college graduates?

The vocational training received by the graduates was highly rated by the employers. Table 22 shows the employer responses when they were asked to rate the technical knowledge, work attitude, work quality, and overall vocational training received by their employees on a scale of very good to very poor. In rating the overall preparation for work, 86 percent of the total group of employers felt the community college preparation had been very good or good. The employers were enthusiastic concerning the work quality and attitude of the graduates and the technical knowledge acquired at the community college (Table 22).

Eighty-seven percent rated the technical knowledge as very good or good. Ninety percent rated work attitude as very good or good and 93 percent rated the work quality as very good or good.

Table 22

EMPLOYER RATING OF VOCATIONAL TRAINING

Vocational Training	Very Good	Good	Neutral	Poor	Very Poor	Total Number	Total Percent
Technical knowledge	41%	46%	12%	1%	-	650	100
Work attitude	59	31	8	2	-	653	100
Work quality	53	40	6	1	-	652	100
Overall rating	39	49	11	1	-	649	100

C. How do community college graduates compare with other employees in same work group?

Employers, in general, felt the community college graduate was better prepared than others who had not attended the college. Table 23 shows that 67 percent felt the community college graduate was better prepared than other employees who may or may not have received training elsewhere. Twenty-eight percent felt that the preparation of graduates and employees who had not attended community college was about the same. Twenty-four of the graduates (5 percent) were rated as less prepared than employees who might have been trained in other settings.

Table 23

EMPLOYER RATING
OF COMMUNITY COLLEGE TRAINING
IN COMPARISON WITH TRAINING
OF NON-COMMUNITY COLLEGE GRADUATES

Preparation of Graduate	Number	Percent
Better prepared	322	67
Both about the same	134	28
Less prepared	24	5
TOTAL	480	100

D. How often is a community college degree required or preferred in hiring for the position?

The requirement or preference for an associate degree or certificate is one indication of the value an employer places on the community college training. Table 24 indicates that among this group of employers, the community college AA degree is required by 28 percent and preferred by another 44 percent. Twenty-eight percent reported they gave no preference to a community college graduate with an associate degree. Program areas which were most likely to prefer or require an AA degree were Accounting, Data Processing, Medical Laboratory Technology, Nursing, and Electronics Technology.

Employer preference for an associate degree increased slightly from a similar survey of 1978 graduates to the survey of 1980 graduates. It is impossible to determine whether this increase occurred because of the superior performance of previous community college graduates. This preference and the previously presented data on high employer ratings of community college graduates indicate that the community college associate degree is important to employers in making employment decisions.

Table 24

DEGREE REQUIREMENTS OR PREFERENCES
BY EMPLOYER

Requirement	1978 Graduates		1980 Graduates	
	Number	Percent	Number	Percent
Must have associate degree	236	31	193	28
Preference given to holders of associate degree	290	38	302	44
No preference given to associate degree	236	31	193	28
TOTAL	762	100	688	100

SUMMARY AND CONCLUSIONS

Students attend Maryland community colleges for a wide variety of reasons and use the learning experience(s) in many ways. This report has looked closely at students who attended the college to prepare for entry into and for continuing development in the world of work. This study examined the characteristics of graduates of programs which are intended to prepare students for both employment in specific occupational fields and to provide each graduate with the skills and outlook necessary to continue learning beyond the skills required to enter a job.

Most of the graduates indicated they were satisfied with the preparation received and reported the college had helped them achieve their goals. Most were employed full-time in jobs that were related to their community college program. The graduates of occupational programs differed in some ways from the graduates of transfer programs but there were similarities in their levels of satisfaction with the college experience and in the achievement of their goals.

In general, the employers of these graduates indicated they were impressed with the technical skills, the training and the attitudes of the community college graduates. More than 90 percent of the employers felt the performance of job skills, familiarity with test equipment, and ability to learn new techniques was adequate or more than adequate. Overall, the rating of vocational training received by the graduates was higher than that found in a similar survey conducted of 1978 graduates and their employers. Eighty-eight percent of the employers indicated they considered the vocational training of the community college graduates to be good or very good. Most rated community college graduates above other similar employees in their training and preparation.

In response to a request for suggestions in areas of employee improvement, most cited the written and oral communication skills of their employees. More than 95 percent of these employees, however, felt the community college graduate's ability to communicate was adequate or more than adequate. The overwhelming majority (97 percent) indicated they would employ future graduates from the community college and most reported they would give preference to community college graduates.

The responses of the graduates concerning particular programs (not analyzed in this report) identified programs at some colleges that needed to be further evaluated and strengthened. These responses were used in the State Board for Community Colleges Program Data Monitoring System and have helped identify programs which will require new resources or particular actions.

The responses of both graduates and employers identified a number of the overall strengths of the occupational programs of community colleges in Maryland. The colleges provide low cost, conveniently located training which is preparation for work and which can go beyond the teaching of particular skills. The graduates were happy with the skills and with the general preparation for the world of work which they received. Their employers were satisfied with their technical skills and the more general preparations for work which involve communication skills and work attitudes.

SYSTEMWIDE CREDIT ENROLLMENT IN OCCUPATIONAL DEGREE PROGRAMS
MARYLAND COMMUNITY COLLEGES
FALL 1981

HEGIS Number	Typical College Program Title	Enrollment			No. of Colleges with Program
		Full-time	Part-time	Total	
5001-01	Business Management	763	2,669	3,432	11
5001-02	Arts Management	1	10	11	1
5002-01	Accounting	1,076	3,379	4,455	12
5003-01	Banking and Finance	33	42	75	3
5003-03	Insurance	4	24	28	1
5004-01	Management	431	1,417	1,848	7
5004-02	Statistical Clerk	1	4	5	1
5004-03	Housing Management	0	5	5	1
5004-05	Materials Management	2	58	60	1
5004-06	Real Estate	31	369	400	6
5004-07	International Trade	23	41	64	1
5004-08	Retail Management	173	322	495	9
5004-09	Personnel Management	11	37	48	1
5005-01	Secretarial Science	1,168	1,789	2,957	17
5007-01	Photography	92	271	363	4
5008-01	Mass Communications	382	295	677	6
5008-02	TV Operations and Maintenance	19	36	55	1
5009-01	Printing Management	46	111	157	3

HEGIS Number	Typical College Program Title	Enrollment			No. of Colleges with Program
		Full-time	Part-time	Total	
5010-01	Hotel-Motel Management	135	112	247	4
5010-02	Restaurant-Club Management	98	154	252	3
5011-01	Air Transportation Management	71	86	157	1
5011-02	Traffic and Transportation Management	4	65	69	1
5012-01	Music	6	30	36	1
5012-02	Fashion Design	111	48	159	1
5012-03	Interior Design	48	62	110	3
5012-05	Commercial Art	211	282	493	3
5099-01	Court and Conference Reporting	2	9	11	1
5099-02	Travel and Tourism	7	51	58	1
5101-01	Data Processing, General	1,304	3,596	4,900	10
5103-01	Computer Programming	1,209	2,837	4,046	8
5104-01	Computer Operator	104	358	462	5
5105-01	Computer Technician	131	261	392	2
5202-01	Dental Assisting	115	79	194	6
5203-01	Dental Hygiene	130	8	138	2
5204-01	Dental Laboratory Technology	53	29	82	2
5205-01	Biomedical Laboratory Technology	145	168	313	9
5206-01	Animal/Veterinary Science Technology	55	56	111	2
5207-01	Radiologic Technology	112	97	209	6
5208-01	Nursing, Registered	1,537	3,262	4,799	14
5209-01	Nursing, Practical	115	41	156	5
5211-01	Operating Room Technician	23	9	32	1

HEGIS Number	Typical College Program Title	Enrollment			No. of Colleges with Program
		Full-time	Part-time	Total	
5213-01	Medical Records Technician	51	65	116	2
5214-01	Medical Assistant	21	30	51	2
5215-01	Respiratory Therapist	114	91	205	4
5216-01	Mental Health Technology	253	356	609	8
5216-01	Drug Abuse Counselor	0	15	15	1
5218-01	Health Services Management	3	48	51	1
5219-01	Physical Therapist Assistant	55	13	68	1
5299-01	Emergency Medical Service	30	48	78	2
5299-02	Nuclear Medicine Technology	34	17	51	2
5299-03	Mortuary Science	36	83	119	1
5299-05	Podiatric Assistant	0	4	4	1
5299-06	Occupational Safety and Health Technology	3	49	52	1
5299-08	Physician's Assistant	7	56	63	1
5299-09	Radiography	10	13	23	1
5299-10	EMT - Paramedic	16	26	42	1
5301-01	Engineering Technology	94	209	303	5
5302-01	Aviation Maintenance Technology	55	2	57	1
5303-01	Drafting Technology	104	156	260	6
5304-01	Architectural Technology	236	324	560	3
5305-01	Chemical Technology	3	8	11	2
5306-01	Automotive Technology	118	205	323	7
5309-01	Civil Engineering Technology	43	86	129	5
5309-02	Surveying	2	45	47	2

HEGIS Number	Typical College Program Title	Enrollment			No. of Colleges with Program
		Full-time	Part-time	Total	
5310-01	Electronics Engineering Technology	545	1,215	1,760	10
5311-01	Electromechanical Technology	90	75	165	3
5311-02	Stationary Engineering Technology	6	66	72	1
5312-01	Industrial Engineering Technology	8	46	54	4
5312-02	Industrial Maintenance Technology	4	39	43	2
5315-01	Mechanical Engineering Technology	98	197	295	5
5317-01	Construction Technology	76	255	331	5
5317-02	Heating, Air Conditioning and Refrigeration	23	82	105	4
5317-03	Carpentry	16	17	33	2
5317-04	Construction Inspection Technology	3	22	25	1
5399-01	Plant Engineering Technology	4	6	10	1
5399-02	Biomedical Engineering	17	30	47	1
5399-03	Coal Mining Technology	13	2	15	1
5399-05	Pollution Abatement Technology	5	14	19	2
5401-01	Environmental and Renewable Resources	16	7	23	1
5402-01	Horticulture, Agricultural Business	12	26	38	3
5402-02	Retail Floristry	27	41	68	1
5403-01	Forest Technology	41	7	48	1
5403-02	Wildlife Management	30	1	31	1
5404-01	Dietetic Technician	65	52	117	2
5406-01	Ocean Engineering Technology	7	22	29	1
5406-02	Oceanography and Estuarine Resources	11	3	14	3

HEGIS Number	Typical College Program Title	Enrollment Full-time	Enrollment Part-time	Enrollment Total	No. of Colleges with Program
5406-04	Marine Maintenance Mechanics	0	2	2	1
5407-01	Science Laboratory Technology	13	24	37	2
5408-01	Environmental Health Technician	4	7	11	2
5501-01	Urban Development Assistant	3	7	10	3
5501-03	Government Service Aide	11	16	27	1
5503-01	Early Childhood Education	166	232	398	7
5503-02	Special Education Instructional Aide	23	55	78	3
5503-03	Child Care Aide	91	156	247	3
5504-01	Library Technician Assistant	0	22	22	1
5505-01	Criminal Justice	871	1,096	1,967	16
5505-02	Correctional Services	20	17	37	2
5505-03	Law Enforcement	0	7	7	1
5506-01	Recreation Leadership	182	133	315	7
5506-02	Park Operation and Management	23	23	46	1
5506-03	Human Services Assistant	122	72	194	1
5507-01	Fire Science Technology	37	185	222	5
5508-01	Public Administration Assistant	2	8	10	2
5599-01	Legal Assistant	49	120	169	4
5599-02	Gerontology	11	38	49	1
5599-03	Para-Professional Counseling	18	26	44	1
5599-04	Labor Studies	11	46	57	1
	TOTAL	14,044	29,045	43,089	

SBCC:09-82

03/27/83 SDCC PROGRAM DATA MONITORING SYSTEM

COLLEGE: HARFORD COMMUNITY COLLEGE

COLLEGE PROGRAM TITLE	YEAR IMPLEMENTED	CURRENT STATUS	HEGIS NUMBER
CERTIFICATE: NOT OFFERED			
ASSOCIATE: NURSING	PRE 1974	ACTIVE	7030100

PROGRAM NUMBER: 5208 01
HEGIS PROGRAM CATEGORY: NURSING, RN

ENROLLMENT:	1977	1978	1979	1980	1981	1982
CERTIFICATE LEVEL						
FULL-TIME	-	-	-	-	-	-
PART-TIME	-	-	-	-	-	-
ASSOCIATE LEVEL						
FULL-TIME	96	113	174	198	145	130
PART-TIME	198	271	246	330	330	397
TOTAL HEAD-COUNT	294	384	420	528	475	527
AWARDS:						
CERTIFICATES	-	-	-	-	-	-
ASSOCIATE DEGREES	46	85	72	72	98	88
TOTAL ALL AWARDS	46	85	72	72	98	88
PERCENT FULL-TIME	33%	29%	42%	38%	31%	25%
FT ENR-TO-AWARD RATIO			1:1	1:1	1:1	1:1
STATEWIDE FULL-TIME ENROLLMENT-TO-AWARD RATIO						1:1
(NUMERATOR = 1/2 F-T ENR 2 YRS EARLIER, SAME YR USED FOR STATE)						

STUDENT FOLLOW-UP STUDIES:

	1978 GRADUATES		1980 GRADUATES	
	COLLEGE	STATE	COLLEGE	STATE
NUMBER OF RESPONDENTS	47	425	28	388
RESPONSE RATE	55%		59%	
FULL-TIME JOB, DIRECTLY RELATED	70%	67%	50%	61%
FULL-TIME JOB, SOMEWHAT RELATED	2%	3%	7%	3%
FULL-TIME JOB, NOT RELATED	2%	1%	0%	2%
PART-TIME JOB	19%	21%	32%	27%
TRANSFERRED, NOT EMPLOYED	2%	2%	4%	1%
SEEKING WORK, NOT EMPLOYED	0%	2%	4%	2%
MILITARY, HOME RESPON, OTHER	4%	5%	4%	5%
TOTAL	100%	100%	100%	100%
TRANSFERRED, REGARDLESS OF EMPL	6%	9%	32%	12%
ACHIEVED PERSONAL GOAL	94%	90%	93%	96%
SATISFIED WITH INSTR IN PROGRAM	96%	82%	100%	94%
AMONG FULL-TIME EMPLOYEES				
MEDIAN ANNUAL SALARY	-	-	$14,029	$14,326
NO. REPORTING SALARY DATA	-	-	15	217
BEGAN NEW JOB AFTER COLLEGE	91%	89%	94%	85%
SATISFIED WITH EMPLMNT PREP	97%	83%	100%	93%

ANNUAL JOB OPENINGS, 1976-1982:

	BALT AREA	STATEWIDE
NURSES, PROFESSIONAL	975	1,438

JOB OPENINGS MAY ALSO BE AVAILABLE IN OTHER OCCUPATIONS. SEE DHR MANPOWER PROJECTIONS. SOME STUDENTS ARE ALREADY EMPLOYED WHILE ATTENDING THE COMMUNITY COLLEGE. THEREFORE, OPENINGS MAY NOT BE NEEDED FOR ALL GRADUATES. OPENINGS ARE FOR MARYLAND ONLY.

SIMILAR PROGRAMS IN MARYLAND COMMUNITY COLLEGES:

COLLEGE	ENROLLMENT FALL, 1982 FT	PT	TOTAL	AWARDS 81-82 CERT	AA	SCH YR TOTAL
ALLEGANY	234	167	401	-	52	52
ANNE ARUNDEL	98	479	577	-	58	58
BALTIMORE	106	94	200	-	50	50
CATONSVILLE	241	803	1044	-	97	97
CECIL	23	74	97	-	-	-
CHARLES	40	23	63	-	25	25
ESSEX	172	652	824	-	79	79
FREDERICK	75	112	187	-	31	31
HAGERSTOWN	25	50	75	-	27	27
HARFORD	130	397	527	-	88	88
HOWARD	66	303	369	-	60	60
MONTGOMERY	50	144	194	-	79	79
PRINCE GEORGE'S	260	563	823	-	90	90
WOR-WIC TECH	17	30	47	-	27	27
TOTAL ALL COLLEGES	1531	3893	5424	-	752	752

DISCIPLINE CREDIT HOUR COST IN NURSING, RN

	1978	1979	1980	1981	78-81 CHG
HIGHER ED PRICE INDEX	156	169	185	203	+30%
STATEWIDE COST:					
ALL DISCIPLINES	$71	$80	$82	$83	+17%
THIS DISCIPLINE	$134	$127	$138	$133	-1%
COLLEGE COST:					
ALL DISCIPLINES	$74	$73	$82	$84	+14%
THIS DISCIPLINE	$174	$135	$157	$87	-50%

THESE COSTS ARE DISCIPLINE COSTS, NOT PROGRAM COSTS; A SINGLE DISCIPLINE MAY SUPPORT SEVERAL PROGRAMS.

PDM QUANTITATIVE CRITERIA CHECKS INDICATE:

AWARDS DECREASED AT LEAST 10% AND BY 10 STUDENTS LAST YEAR.
EMPLOYMENT FULL-TIME IN RELATED JOB 10% LOWER THAN STATE.

SOURCES: HEGIS REPORTS, FOLLOW-UP STUDIES, DEPT OF HUMAN RESOURCES "OCCUPATIONAL-INDUSTRIAL OUTLOOK" AND DISCIPLINE COST ANALYSIS. DATA IS SUBJECT TO CONFIRMATION BY THE COLLEGE.

MARYLAND COMMUNITY COLLEGES
EMPLOYER QUESTIONNAIRE

The purpose of this questionnaire is to help your community college and the State Board for Community Colleges assess and improve their programs. Please return it in the envelope provided. Thank you for your assistance.

Name of Graduate

Graduate's Job Title

A. For the job held by the community college graduate you supervise, is a two-year associate degree required? (check one)

14
- ☐ 1. Yes, at least an associate degree is required
- ☐ 2. No, but preference is given to holders of an associate degree
- ☐ 3. No, and no preference is given

B. Based on your own experience of supervising a community college graduate, please indicate how adequately you feel the college prepared him/her in each of the areas listed below. (check appropriate response)

		More Than Adequate 1	Adequate 2	Inadequate 3	Not Observed or Not Applicable 4
15	Performance of job skills from beginning of employment	☐	☐	☐	☐
16	Familiarity with any test or laboratory equipment required by this job from the beginning of employment	☐	☐	☐	☐
17	Ability to learn new techniques on the job	☐	☐	☐	☐
18	Ability to communicate with superiors	☐	☐	☐	☐
19	Ability to work well with other workers	☐	☐	☐	☐

(over)

ITEMS BELOW FOR COLLEGE USE ONLY

	1	2	3	4		5	6	7	8	9	10		11		12							13	
lege Code					Program Number								C	A	B	I	A	H	W	F		M	F

C. Please rate the vocational training received by the individual in the following areas: (check appropriate response)

		Very Good 5	Good 4	Neutral 3	Poor 2	Very Poor 1
20	Technical knowledge	☐	☐	☐	☐	☐
21	Work attitude	☐	☐	☐	☐	☐
22	Work quality	☐	☐	☐	☐	☐
23	What is your overall rating of the vocational training received by this individual as it relates to the requirements of his/her job?	☐	☐	☐	☐	☐

D. As a result of this person's vocational training, how would you rate his/her preparation in relation to other employees in his/her work group who did not receive such training? (check one)

24
- ☐ 0. No basis for comparison
- ☐ 1. Individual is better prepared
- ☐ 2. Both are about the same
- ☐ 3. Individual is less prepared

E. In general, would you employ another graduate from this community college who has a degree or certificate in the same area as your current employee?

25
- ☐ 1. Yes
- ☐ 2. No Why? _____

F. Please specify any additional skills or areas of knowledge that you feel an Associate in Arts or Certificate graduate you employ should have.

_____

_____

_____

G. Please feel free to add any additional comments.

_____

_____

_____

H. If further evaluation of college programs is needed, would you be willing to share your expertise and be contacted by our faculty?

26
- ☐ Yes ☐ No

Supervisor completing this questionnaire:

Name: _____

Title: _____

Company/Organization: _____

City/State/Zip Code: _____

MARYLAND PUBLIC COMMUNITY COLLEGES
GRADUATE FOLLOW-UP QUESTIONNAIRE

The purpose of this questionnaire is to help your community college and the State Board for Community Colleges assess and improve their programs. Please complete it promptly and return it in the envelope provided. This form should require less than 10 minutes to complete. All answers will be strictly confidential. Thank you for your assistance.

(Please make corrections if necessary.)

_____
(Name)

_____
(Address)

_____

ALL GRADUATES SHOULD COMPLETE PART I.

PART I.

A. Check the items that describe your current status. (check as many as apply)

37 [ ] In school
38 [ ] Employed
39 [ ] Not employed
40 [ ] Full-time home responsibility
41 [ ] In active military services
42 [ ] Other (specify) _____

B. Check the one statement which most closely corresponds to your primary reason for attending this community college. (check one)

[ ] 1. Exploration of new career or academic areas
[ ] 2. Preparation for immediate entry into a career
[ ] 3. Preparation for transfer to a four-year institution
43 [ ] 4. Update skills for a job currently held
[ ] 5. Interest and self-enrichment
[ ] 6. Other (specify) _____

C. Was your goal (indicated in Item B) achieved by the time you graduated from this community college? (check one)

44 [ ] 1. Yes
[ ] 2. No

D. How satisfied were you with the quality of classroom instruction in your program of study? (check one)

45 [ ] 1. Extremely satisfied
[ ] 2. Satisfied
[ ] 3. Unsatisfied

E. How satisfied were you with the overall quality of this community college? (check one)

46 [ ] 1. Extremely satisfied
[ ] 2. Satisfied
[ ] 3. Unsatisfied

F. What was the **most important** reason you chose this communtiy college? (check one)

47
- [ ] 1. Low cost
- [ ] 2. Convenient location
- [ ] 3. Program I wanted was offered
- [ ] 4. Financial aid was available
- [ ] 5. Unwilling or unable to attend another college
- [ ] 6. College's good academic reputation
- [ ] 7. Advice of friends
- [ ] 8. Advice of high school counselor

IF YOU ARE IN SCHOOL, COMPLETE PART 2; OTHERWISE, GO TO PART 3.

PART 2.

G. What type of school are you currently attending? (check one)

48
- [ ] 1. Another Maryland public community college
- [ ] 2. A public State college in Maryland
- [ ] 3. The University of Maryland
- [ ] 4. Maryland private four-year college or university
- [ ] 5. A private two-year Maryland college
- [ ] 6. Maryland technical or commercial school
- [ ] 7. Out-of-state four-year public college or university
- [ ] 8. Out-of-state four-year private college or university
- [ ] 9. Other out-of-state college or university

Enter name of school here:

_____

_____

H. What is your enrollment status in the school indicated above?

49
- [ ] 1. Part-time
- [ ] 2. Full-time

I. Indicate your overall grade point average for credits earned at the transfer school (based on a 4-point scale).

50
- [ ] 1. Less than 2.0
- [ ] 2. 2.0-2.4
- [ ] 3. 2.5-2.9
- [ ] 4. 3.0-3.4
- [ ] 5. 3.5 and over
- [ ] 6. Have not yet completed a full semester

J. To what extent was your curriculum program at this community college related to your major at the transfer school?

51
- [ ] 1. Directly related
- [ ] 2. Somewhat related
- [ ] 3. Not related

K. How satisfied were you with your preparation for transfer?

52
- [ ] 1. Extremely satisfied
- [ ] 2. Satisfied
- [ ] 3. Unsatisfied

L. How many credit hours earned at this community college were not accepted at the transfer school?

53
- [ ] 1. All credit hours accepted
- [ ] 2. Lost 1-3 credit hours
- [ ] 3. Lost 4-6 credit hours
- [ ] 4. Lost 7-12 credit hours
- [ ] 5. Lost 13-20 credit hours
- [ ] 6. Lost more than 21 credit hours

IF YOU ARE EMPLOYED, COMPLETE PART 3; OTHERWISE, GO TO PART 4.

PART 3.

M. Your current employment status.

54 [ ] 1. Employed part-time
[ ] 2. Employed full-time

N. What is the title of your current position?

_____

Employer's name and address:

55-57 S O C

_____

_____

_____

O. Will you give the college permission to contact your employer for the purpose of evaluating your community college program?

[ ] 1. Yes
[ ] 2. No

58 Supervisor's name: _____

Supervisor's title: _____

P. When did you begin your present job? (check one)

[ ] 1. Before attending this community college
59 [ ] 2. While attending this community college
[ ] 3. After graduating from this community college

Q. Geographic location in which you are presently employed. (check one)

[ ] 1. Same county/city as this community college
[ ] 2. Other county in Maryland
[ ] 3. Baltimore City
[ ] 4. Washington, D.C.
60 [ ] 5. Delaware
[ ] 6. Pennsylvania
[ ] 7. Virginia
[ ] 8. West Virginia
[ ] 9. Other state

R. Relationship between your program at this community college and your job. (check one)

[ ] 1. Program directly related to job
61 [ ] 2. Program somewhat related to job
[ ] 3. Program not at all related to job

S. If your job is not related to your program of study, check the major reason below. (check one)

[ ] 1. Could not find job in field of preparation
[ ] 2. Better pay in field in which employed
[ ] 3. Better opportunity for advancement in field in which employed
62 [ ] 4. Did not want to work in the field of preparation
[ ] 5. Program of study at this college was not career-oriented
[ ] 6. Other (please explain) _____

T. On the average, how many hours per week do you work?

63-64 _____ hours

U. If you are employed *full-time*, what is your current salary (without overtime and before deductions)?

65-68 $_____ per (check one)

69
[ ] 1. Hour
[ ] 2. Week
[ ] 3. Month

V. Who helped you locate your current job? (check as many as appropriate)

70 [ ] Faculty member
71 [ ] College Placement Office
72 [ ] Newspaper
73 [ ] Employment agency
74 [ ] Contacted employer on my own
75 [ ] Family or friend
76 [ ] Other

W. How satisfied are you with your community college preparation for employment? (check one)

[ ] 1. Extremely satisfied
77 [ ] 2. Satisfied
[ ] 3. Unsatisfied

IF YOU ARE NOT EMPLOYED, COMPLETE PART 4.

PART 4.

X. Please check one.

78 [ ] 1. I am seeking a job
[ ] 2. I am not seeking a job

Y. If you are seeking a job, please check the major reason you have been unable to secure employment. (check one)

[ ] 1. Salary too low in the field for which I was prepared at the community college
[ ] 2. There are few openings in the field for which I was prepared
79 [ ] 3. I need more education to qualify for the job I want
[ ] 4. I have changed my career objective since graduating
[ ] 5. I have not looked hard enough

What changes could be made to your community college program to improve a graduate's employment and/or transfer performance?

_____

_____

_____

Thank you for completing this questionnaire. Please return it in the enclosed prepaid envelope.

42206 7/83

ERIC Clearinghouse for Junior Colleges SEP 9 1983